

CLAIMS

- 5 1. Method for extracting energy from a flowing fluid, in particular from (sea)water and/or wind flows, using an assembly of devices positioned close to one another, characterised in that a guiding device of said assembly is set with respect to said fluid flow in such a way that as a result forces with a component perpendicular to the undisturbed direction of flow are exerted, such that fluid with higher kinetic energy or with lower kinetic energy is guided by an energy-extracting device of the assembly, compared with the normal situation in which said force component is lacking.
- 10 2. Method according to Claim 1, wherein the ratio between the generated force component perpendicular to and that parallel to the undisturbed direction of flow is more than 0.1, in particular more than 0.2 and more particularly more than 0.3.
- 15 3. Method according to Claims 1 or 2, wherein several guiding devices cooperate in the generation of the same circulation, such that the strength and/or the scale of the circulation increases.
4. Method according to one of the above Claims 1 to 3, wherein one device of the assembly, optionally having a guiding function, is operated with an axial induction a greater than $1/3$ or less than zero.
- 20 5. Method according to one of the preceding claims, wherein said guiding device is moved.
6. Method according to one of the preceding claims, wherein at least one guiding device on is a horizontal shaft turbine, the rotor shaft of which makes an angle of more than 5 degrees, in particular more than 10 degrees and more particularly more than 15 degrees with respect to the undisturbed direction of flow.
- 25 7. Method according to Claim 6, wherein the guiding device has its blades cyclically adjusted.
8. Method according to one of the preceding claims comprising several guiding devices, wherein guiding by said devices is such that wakes from energy-extracting devices are bundled by steering them towards one another so that mixing losses are limited.
- 30 9. Method according to one of the preceding claims, wherein several turbines on a common support together have a guiding function.

10. Method according to one of the preceding claims, wherein guiding is such that the slow fluid is guided to the left in the northern hemisphere and to the right in the southern hemisphere.
11. Method according to one of the preceding claims, wherein the fluid guiding essentially takes place on the upstream side of the assembly.
12. Method according to one of the preceding claims comprising several guiding devices arranged essentially in the direction of flow one after the other, wherein the ratio between the force perpendicular to and that parallel to the undisturbed direction of flow exerted by guiding devices in the direction of flow decreases in part of the assembly.
13. Method according to one of the preceding claims in combination with Claim 6, wherein, moving through the assembly from the upstream to the downstream direction, the inclination of the horizontal shaft turbines in part of the assembly decreases.
14. Method according to one of the above claims, wherein at least one device is set at an angle to the undisturbed direction of flow, without the shadow loss of devices on the downstream side at a distance less than 10 times the characteristic size of the inclined device concerned decreasing.
15. Method according to the one of the above claims comprising various assemblies, wherein at least one upstream assembly or one device thereof has a guiding function for at least one downstream assembly.
16. Method according to one of the above claims, wherein differences in density in the fluid are applied by heating or by cooling, for example caused by evaporation of water, to generate said force.
17. Assembly comprising a device for extracting energy from a fluid flow, characterised in that the assembly comprises a guiding device by means of which forces having a component perpendicular to the undisturbed direction of flow are generated, such that fluid with kinetic energy differing from the kinetic energy that is effective in the normal situation where said force component is lacking is fed through said device for extracting energy from a fluid.
18. Assembly according to Claim 17, wherein said guiding device on average has an inclination of more than 5° , in particular more than 10° and more particularly more than 15° with respect to the device for extracting energy from a fluid flow.
19. Assembly according to Claim 17 or 18 comprising at least twenty devices for extracting energy, wherein the assembly essentially extends in the dominant direction of flow over

a length that is more than the width of the farm and in particular over a length that is more than $3/2$ times the farm width and more particularly over a length that is more than twice the width of the farm.

- 5 20. Assembly according to one of Claims 17 - 19 having at least twenty devices for extracting energy, wherein the spacing between the turbines in the dominant direction of flow is less than 5 times, in particular less than 4 times and more particularly less than 3 times the characteristic size of the turbines concerned.
- 10 21. Assembly according to one of Claims 17 - 20 having at least twenty devices for extracting energy, wherein the total surface area occupied by the turbines takes up more than 5 %, in particular more than 10 % and more particularly more than 20 % of the surface area of the farm.
- 15 22. Assembly according to one of Claims 17 - 21, wherein several devices for extracting energy are positioned together in groups with a spacing between the centres of the areas occupied of less than one and a half times the characteristic size of a turbine and wherein the groups act as guiding devices.
23. Assembly according to one of Claims 17 - 22, wherein passive or active guiding devices are installed outside the farm and essentially on the windward side with respect to the dominant wind direction.
- 20 24. Assembly according to one of Claims 17 - 23 comprising a support construction for said device, wherein at least part of the support construction of at least one of the guiding or energy-extracting devices is provided with profiles by means of which a force perpendicular to the undisturbed fluid direction can be exerted in order to improve guiding.
- 25 25. Assembly according to one of Claims 17 - 24, wherein at least one guiding device comprises a wind turbine having a tower that is so constructed that this is suitable for exerting a lateral force on the undisturbed fluid direction, such that the guiding by the turbine and tower combination improves.
- 30 26. Assembly according to one of Claims 17 - 25, comprising a device with a horizontal shaft which has a guiding function and wherein said device has a fixed angle of tilt of greater than 10 degrees, in particular greater than 15 degrees and more particularly greater than 20 degrees or a variably adjustable angle of tilt.
27. Assembly according to one of Claims 17 - 26, wherein said device is a vertical shaft turbine that has the option of cyclically adjusting its blades, so that this turbine is able

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to exert a lateral force on the flow and thus can have a guiding function.

28. Assembly according to one of Claims 17 - 27, wherein at least one guiding device is set up such that it is mobile.
29. Assembly according to one of Claims 17 - 28, comprising an offshore wind farm
5 according to one of the above claims.
30. Assembly according to one of Claims 17 - 29, wherein said assembly is controlled by means of software that this self-learning and wherein optimisation is carried out with regard to the overall performance of the farm, to which the performances of the individual devices are subsidiary.
- 10 31. Assembly according to the preceding Claims 17 - 30, wherein the assembly is controlled by means of software that also uses information on the stability of the atmosphere in order to set parameters such as the scale of circulation, the position of any mobile devices and the setting of turbines with variable angles of tilt, if present.

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